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## **ABSTRACT**

The present invention relates to cardiac hypertrophy. More particularly, the present invention defines the molecular events linking calcium stimulation to cardiac hypertrophy. More specifically, the present invention shows that Ca++ stimulation of the hypertrophic response is mediated through MEF2. Thus, the present invention provides methods of treating cardiac hypertrophy as well as transgenic constructs for preparing transgenic animals. Further provided are methods of using the transgenic animals of the present invention, or cells isolated therefrom, for the detection of compounds having therapeutic activity toward cardiac hypertrophy.